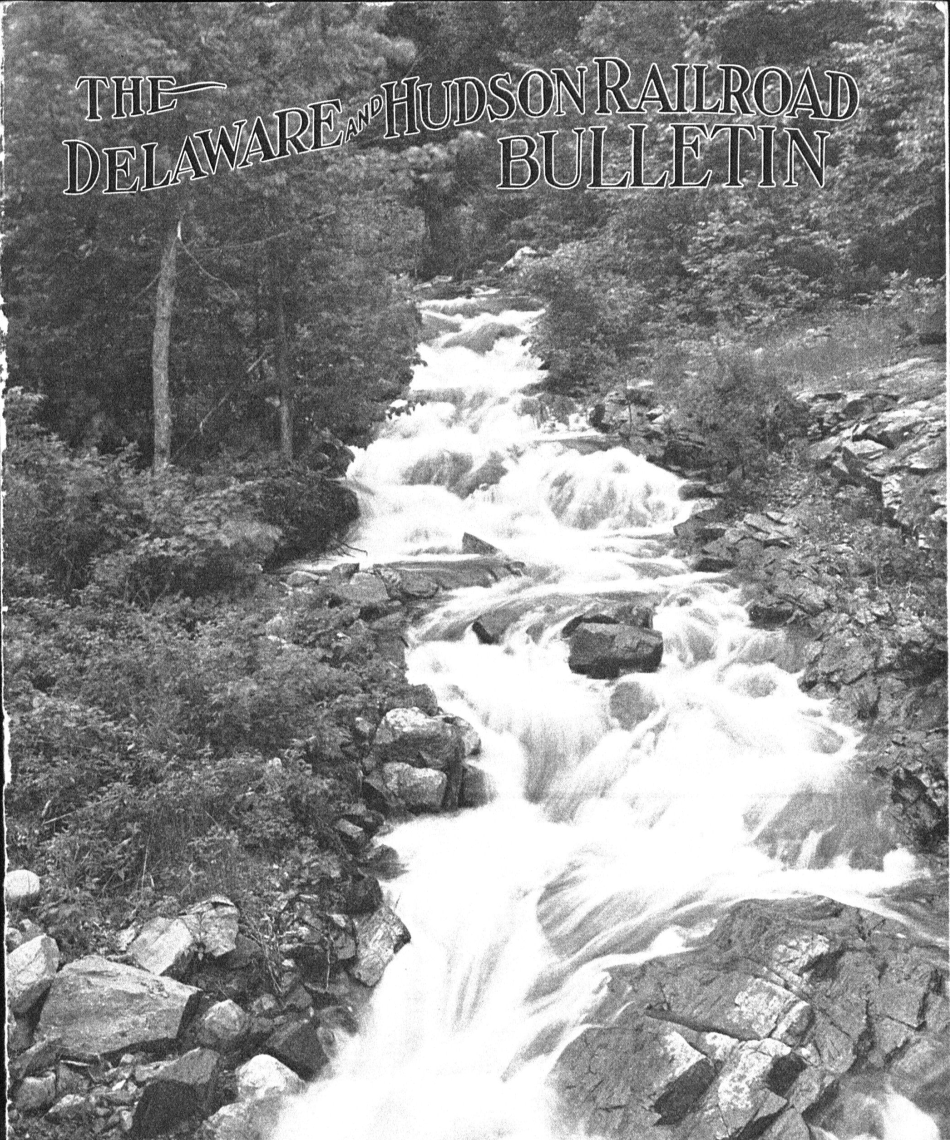
THE DELAWARE AND HUDSON RAILROAD BULLETIN



"the D&H"

JANUARY 1, 1933

CASCADE
CLEMONS, N.Y.

The New Year

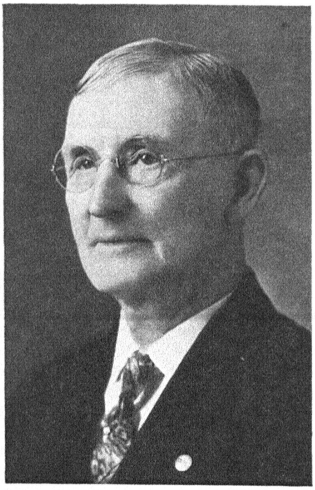
A flower unblown; a book unread;
A tree with fruit unharvested;
A path untrod; a house whose rooms
Lack yet the heart's divine perfumes;
A landscape whose wide border lies
In silent shade 'neath silent skies;
A wondrous fountain yet unsealed;
A casket with its gifts concealed—
This is the year that for you waits
Beyond tomorrow's mystic gates.

—HORATIO NELSON POWERS.

"the D&H" The DELAWARE AND HUDSON RAILROAD "the D&H"
CORPORATION
BULLETIN

Dean of D. & H. Enginemen

Robert D. Copeland Pulled Throttle 45 of His 59 Years' Service



ROBERT D. COPELAND

WELL, Sir, one night I got into a pretty tough box. It was snowing and blowing to beat the band as I started out with the 454 and a four-car passenger train. At Olyphant we picked up a 'flag' who told us that his train of 50 empty box cars was ahead and would pull in on the siding at Valley Junction.

"When we reached the Junction there wasn't room for 50 more cars so he decided to go on to Providence. In a little while we stopped again to pick up the freight conductor who had gone back to protect his train as they had found the local freight on the siding at Providence and the extra was forced to go on to Green Ridge.

"Feeling our way through the swirling snow we rounded a curve and I suddenly saw the freight coming at me backward just as fast as the engine could push those 50 cars. It was learned later that some helpful body, trying to speed things up, had assumed that the conductor was on the rear of the train and would throw the switch for the crossover as soon as the caboose had cleared. So he gave the engineer a back-up signal——

"But that was neither here nor there. To the conductor, fireman and flagman, who were all on the left side of the cab and oblivious of the approaching danger, I yelled, 'Jump, boys!' In those days they didn't need a second invitation and all disappeared into the darkness.

"What a predicament! Somewhere close behind us was the local freight that had followed us right out of Providence. There was no chance to back-up for fear of colliding with him. I reversed the engine and, without using the brake, brought the four coaches to an easy stop just before the approaching caboose splintered against the front of the engine.

"The wooden caboose and three or four freight cars took the full shock of the collision, though they weren't much good after it was over and the engine needed quite a lot of fixing. Fortunately no one was hurt, although two women passengers became hysterical ten minutes later when told there had been a wreck," concludes ROBERT D. COPELAND, veteran "runner" on the Pennsylvania Division, who retired from active service February 1, 1932, after having completed 59 years with the Delaware and Hudson.

From the time, July 17, 1873, when he started carrying water for his father, then foreman of the

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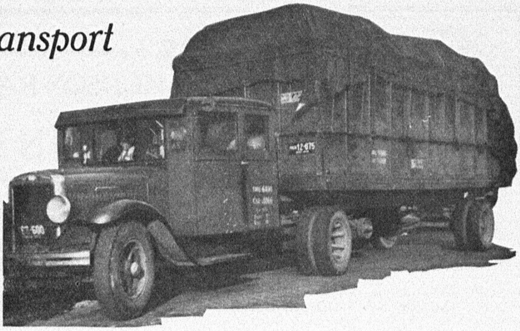
Highway Transport and the Railroad Grievance



Part I—Upsetting the Railroad Monopoly

This series of four articles dealing with the regulation of Highway and Railroad Transport has been developed by J. K. McNeillie, Superintendent, Office of Vice-President and General Manager, based upon papers presented before The Engineering Institute of Canada and published in *The Engineering Journal.*

RECENTLY there was a meeting of motor vehicle users and manufacturers at Washington, D. C., dominated by the manufacturers of vehicles for sale to users of the country's highways for profit. The evident purpose was to organize a clearing house for the development of "Facts," and to formulate a campaign of politics and propaganda for the advancement of the interests of highway transport in this country.

Railroad executives, on the other hand, are associated for the purpose of advancing and protecting the interests of rail transportation, and there is no lack of activity on their part in the matter of improving the service, conserving the best interests of the people and avoiding economic waste.

A Royal Commission has investigated the condition of the railroads in the Dominion of Canada where there is grave danger of a catastrophe because of the surplus of transportation in that country.

The unfortunate, though temporary, effect of the present depression on the traffic of the railroads cannot be overlooked, but the entire situation is aggravated, even under normal conditions, by the success attained by motor vehicles in transporting persons and property over highways provided by the State with a lavish hand.

Consideration of the subject of transportation in its entirety must, of necessity, take cognizance of the important place of inland waterways and canals, pipe lines constructed for the distribution of petroleum products for long distances, and the aeroplane that has long since demonstrated its ability to transport passengers, mail and express. But dominating all as a competitor of the railroads is the motor vehicle.

A monopoly of land transport, along and within a reasonable distance of the line, was what those who organized to construct railroads obtained when they procured their charters. Monopolism thus created was enjoyed for many years, but has long since ceased to exist. The most conspicuous, illusive and important factor in upsetting the monopoly has been and is highway transport. It has grown with marked rapidity. The greatest strides in this country and in Canada have been made during the last ten years and no one can say when the saturation point will be reached. On the other hand, there are certain conditions that have become settled and they should be mentioned at the outset. They are:

> The internal combustion engine applied to motor vehicles of various types provides a useful and popular means of transportation.

The use of motor vehicles is encouraged and facilitated by the availability and constantly increasing mileage of surfaced highways, provided by the State.

Highway transport is better adapted to moving persons and property, under certain conditions, than is railroad transport.

Highway transport as compared with railroad transport is practically free from restrictive legislation.

With these facts in mind, the writer will endeavor to appraise the situation, setting down what appear to be the important developments, particularly within the present century, leading up to the present status; then to find what, if any, grievance the railroads have under the circumstances, and reach certain conclusions as to how the situation can best be met with, considering what has transpired and what is likely to happen in the future.

By the year 1900 all the railroads of this country had a right-of-way about 192,000 miles in length. They owned 36,700 locomotives, about 1,300,000 freight carrying cars of diversified types, designed and suited to carry any kind of commodity offered for transportation, also about 34,000 passenger carrying cars. They had provided all the plant facilities necessary to maintain the equipment. Some railroads had built their own equipment, both locomotives and cars, but to meet the demand beyond their capacity or desire to build for themselves, there were numerous independent manufacturers of locomotives and other rolling stock ready and anxious to furnish equipment. Their business, generally, was in a flourishing state. Incidentally these manufacturers, recruited in the main from the ranks of railroad officers and employes, contributed in a marked degree to the development and improvement in design and type of all kinds of rolling stock in its advancement to the high state of efficiency that was subsequently attained.

All the facilities found to be inseparable from the functioning of railroad transportation had been liberally provided. Terminals for the handling of freight and passenger traffic had been built at great expense, many of them on city property which even at that time was expensive and on all of which the annual tax bill was a formidable sum.

Road beds had been developed to at least a state of permanency. Rail in main tracks had been increased to a weight of ninety pounds to the yard. Passenger trains were operated, safely in the main, at high speeds, schedules were adhered to with a reasonable degree of regularity, comfortable and even luxurious appointments were available and generally used. Carload freight and less carload shipments were moved for short and long distances with reasonable dispatch.

Generally, the transportation of persons and property was handled by the railroads with a diligence which was not the less evident because they had a practical monopoly of land transportation. Of course, management had its limitations and the human element then, as now, had to be reckoned with. There were the factors of incompetence, carelessness, dishonesty and neglect of duty. The far reaching and evil effects from loss of or damage to life and property were not perhaps as seriously viewed by officers and employes as they subsequently came to be.

The basic laws affecting rail transportation were still in effect. Restrictive railroad legislation had been enacted to the point that the people through their legislators had a strangle hold on the transportation industry that has never for a minute been relaxed. The Interstate Commerce Commission had been in power, and I use the word advisedly, for eleven years. State Public Service Commissions, or their equivalent had been organized, and these regulatory bodies were exercising their police powers over the railroads, in no uncertain manner.

It will not be necessary to refer here at any length to railroad developments of themselves in the intervening years, except as it may be useful in fixing certain events which will come within the scope of this article. There was a consistent growth in the number and efficiency of operating units. Locomotives were improved in design and efficiency, as were all types of rolling stock, both passenger and freight. Tractive effort of locomotives was materially increased. Terminals and all kinds of facilities for patrons were amplified and improved. The railroad facilities for maintenance of equipment underwent marked changes for the better, all brought about at great expense, and the tax bill became more burdensome year by year.

Then came the great emergency—Government Control for three years. The war was won, and the railroads, that had played so important a part, were turned back to their owners in a state of dilapidation bordering on collapse; a condition that has taken years of intelligent effort and the expenditure of fabulous sums of money to correct.

Main track mileage has grown from about 192,000 in 1900 to 249,052 in 1930. Locomotives have increased to 60,189 units and there has been a constant increase in tractive effort. Passenger carrying cars, greatly improved as to design and comfort, have increased to 53,854. Freight carrying cars, larger in capacity, safer in construction, and adapted to the carriage of all kinds of com-

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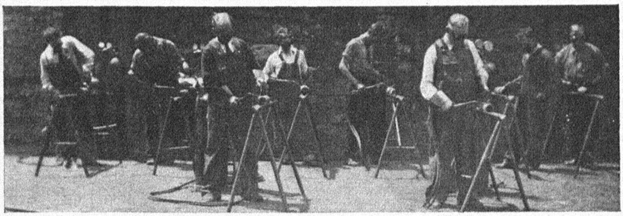


M. of W. Men Back to School

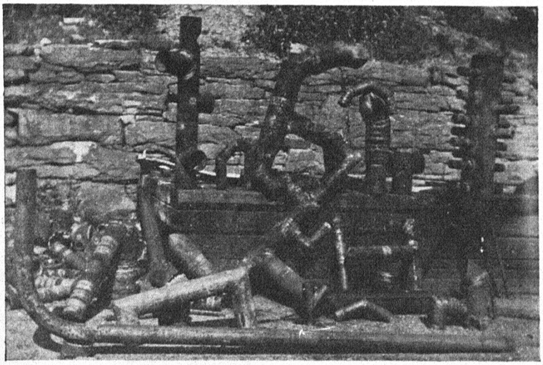
Supervisors Attend Oxy-Acetylene Cutting and Welding Classes on Own Time

LAST year the Management extended to the Maintenance of Way Department the privilege of having schools of instruction and practice in the art of oxy-acetylene cutting and welding conducted by the Air Reduction Sales Company. The offer was readily accepted and when it was made known that a class of this kind was to be held, numerous applications to enter it were quickly made to the Division Officers of the Maintenance of Way Department.

Owing to the large number of applications and the limited equipment available it was soon evident that only a comparatively few applications could be considered. As the nature of the training to be given was to deal mostly with pipe cutting and welding, and the reforming of rail ends, it was decided to limit the classes to employes whose duties included work of this kind. Accordingly, classes were organized comprising supervisors of both Track and Bridge and Building Departments; also the track welders and some of the plumbers.

It was decided to hold a school two days each week. The hourly rated employes working on short time, namely four days a week, volunteered to attend class on their own time and accordingly the details were worked out to accommodate such an arrangement.

The course of instruction comprised thirty lessons, twenty-four of which were given over to pipe cutting and welding, together with the fabrication of pipe fittings, and the remaining six lessons dealt with the reforming and heat treatment of rail ends. The rudiments of the art having been taught in the pipe welding course, the students readily adapted themselves to the reforming of battered rail ends, hence this course required a fewer number of lessons



Samples of Welds which stood a hydrostatic test for leaks. In foreground is a 90-degree bend made in a piece of 4" pipe.

Left to right, Mr. J. Galloway, Instructor, Air Reduction Sales Co., Mr. J. L. Varker, B. & B. Dept., who read lectures and kept records, Mr. Joseph Feik and Mr. Raymond Tuttle who assisted the instructor.

than did the pipe welding course. There were seventeen lectures connected with the course of instruction, each dealing with a different subject and all of them very vital to the art.

Each school was divided into two classes made necessary on acount of the number of oxy-acetylene outfits available. The first class assembled at 8:00 o'clock A. M. and were instructed in practice from then until 11:00 o'clock A. M. when the second class reported. Both classes then listened to the reading of the lecture after which followed a period for questions and discussions. School was adjourned for lunch at 12:00 o'clock noon. The second class received their practice in the afternoon from 1:00 o'clock P. M. until 4:00 o'clock P. M.

A local representative of the Air Reduction Sales Company was instructor while one of the supervisors was delegated to read the lectures and keep a record of the class. These consisted of maintaining two sheets for each member, one showing the hours of attendance each day and the other showing the members' daily progress set up by percentages for the different operations connected with handling the equipment and materials, cutting and welding, etc. For example, each man was graded according to the way he set up and handled the outfit, adjusted the gases, his neatness in cutting and welding, the strength of his welds and also his knowledge of the subjects dealt with in the several lectures. In addition to the foregoing a third daily sheet was kept for the class as a whole on which was recorded each man's name and the time he attended the lecture and practice, as well as the name of the lecture for the day, and the nature of the practice.

After each lecture was read the instructor enlarged upon it by illustrating it on the blackboard. He also employed the aid of charts which were furnished by the Air Reduction Sales Company for this purpose. He led the discussion which followed each lecture and questioned the members as to their knowledge of the lectures previously read. In order to give an idea of the nature of the lectures the names of some of them follow: "Safety Precautions and Care of Apparatus," "Combustion," "Regulating the Gas Supply," "The Cutting "Torch," "The Welding Torch," "Oxygen and Oxygen Cylinders," "Acetylene and Acetylene Cylinders," "Flame, Its Structure and Nature," "Heat and Temperature," "Iron and Steel."

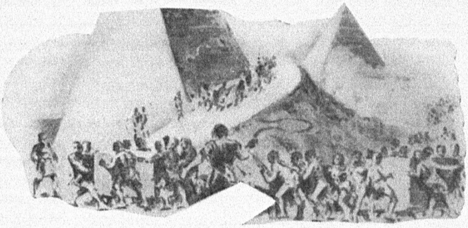
During practice periods the instructor moved among the students, teaching them the proper way of going about the particular thing they were doing and offering constructive criticism. At times he would demonstrate some special feature to the group as a whole. The first few lessons of the practical

(*Continued on page 13*)

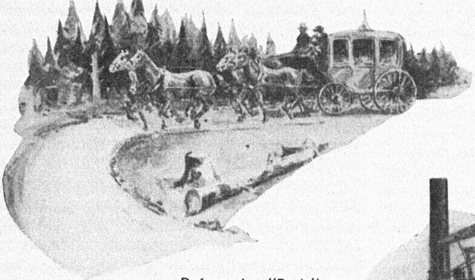
Pennsylvania Division's Combined Classes

CONSIDER

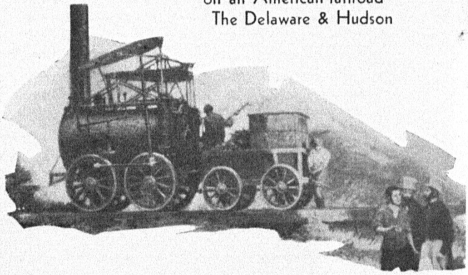
The Ever Changing Conditions



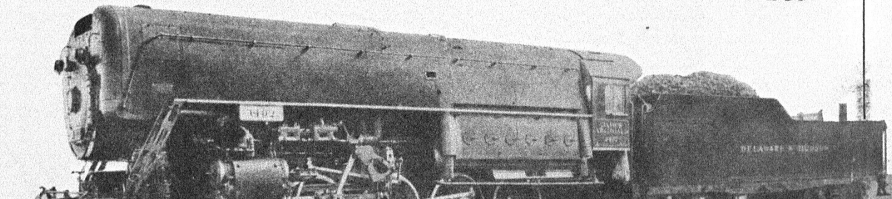
Before the Wheel



Before the "Rails"



The "STOURBRIDGE LION"
First locomotive to operate
on an American railroad—
The Delaware & Hudson



The "JAMES ARCHIBALD"
High pressure locomotive—one of the latest contributions to efficient and economical transportation.

THE DELAWARE AND HUDSON RAILROAD
CORPORATION

OFFICE OF THE PRESIDENT

32 NASSAU STREET, NEW YORK November 10, 1932.

In the growth of industrial civilization there have been many periods of severe disturbance. There was one of great severity following the Revolutionary War and another after the War Between the States. Others have occurred in 1819, 1837, 1857, 1893, 1907, and the one in which we are now involved, in 1929.

The stock explanations - a declining output of gold, a fall in the price of silver, over-production, under-consumption, super-salesmanship, installment buying, price control, speculation - are, in some cases, effects and, taken together, entirely inadequate.

The phenomena involve a profound dislocation. It is usually the product of a great war, the introduction of new industries, an exaggerated or too rapid change in the associated relations of management, capital and labor. The period required to bring about ordered relations is from three to six years. Much has already been accomplished.

The progress of civilization is definitely marked by the development of transportation. From the early days when man packed his own burden, followed by his domestication of the pack animal, the bringing into use of the cart, the wagon, the stage coach, the sail boat, the steamship, the railways, the automotive vehicle, and lastly, the airplane, the right of the public to the best and most efficient means of transportation has been recognized.

The railroads were an essential factor in the rapid growth and development of this country. They are now faced with changing conditions which must be recognized and dealt with effectively. The short haul passenger business, I think, has been permanently lost to the passenger automobile. The short haul freight business, particularly for package freight, perishable goods, and perhaps live stock, will continue to be increasingly absorbed by the automobile truck.

To adapt the railroads to these changing conditions, we must look to -

1. The relief of management from restrictive regulation, the repeal of the unwieldy mass of Federal and State legislation which so adversely affects the efficient operation of the railroads, and uniformity of regulation for all modes of transportation.
2. The adjustment of the items Taxes, Wages and Working Conditions.
3. Elimination of waste through the abandonment of all unused service, obsolete facilities and railway mileage no longer justified.
4. The development of the essential railroad facilities to the highest state of efficiency through the improvement of grades, reduction of curves, shortening of lines, application of ballast and heavier rail, strengthening of bridges, and improvement of steam power.
5. Amelioration of the five major hazards of the workman; i.e., sickness, accident, death, unemployment and superannuation, or the incapacity of old age.

If we could avoid the introduction of new causes of disturbance and deal effectively with these matters, the railroads would soon be on the road to a high state of prosperity.

L. F. Loree
President

Reprinted from *The Railway Age.*

The
Delaware and Hudson Railroad
CORPORATION
BULLETIN

Office of Publication:
DELAWARE AND HUDSON BUILDING,
ALBANY, N. Y.

PUBLISHED MONTHLY by The Delaware and Hudson Railroad Corporation, for the information of the men who operate the railroad, in the belief that mutual understanding of the problems we all have to meet will help us to solve them for our mutual welfare.

All communications should be addressed to the Supervisor of Publications, Delaware and Hudson Building, Albany, N. Y.

Vol. 13 January 1, 1933 No. 1

No Special Favors

NO, the railroads don't want special favors. They don't want government subsidies such as are given to their competitors, the waterways. They do not want an entire escape from Federal regulation, as is enjoyed by the trucks.

What they do want is fair treatment—a transport policy that will let all carriers compete under conditions of equality for business. If it is done, each will carry goods falling naturally into its field—each, in the long run, will prosper. It will mean a tremendous strengthening of every factor in one of our greatest industries, transportation.

In normal times the rails employ 1,000,000 or so workers. They spend hundreds of millions for supplies. They are leaders in community development. A fair deal for them is simply a fair deal for the public.

—*The Sidney Enterprise.*

Easier to Avoid!

FACING keen and destructive competition, the railroads are, or should be, putting forth every effort to hold and regain traffic. With this in mind we recount the experiences of a traveller on another road.

Having purchased railroad and Pullman transportation on one of the best trains he took his seat expecting to enjoy the best the railroad had to offer.

It was a cold morning and the train had not gone far when it was apparent that the car door, due to improper adjustment of the door-closer device, remained open about two inches. This caused a draft which was very uncomfortable for the occupants of the car.

Efforts of the porter to close the door were fruitless due to the steady procession of porters, waiters, trainmen and conductors passing through. Of the entire number the only one who closed the door behind him was the train conductor.

Of course the door should have been properly adjusted but any piece of equipment is subject to failure enroute, however undesirable this may be. But the greater failure was that of the careless railroaders, who, though not realizing it, were by their own actions hastening the day of their downfall. In discussing the matter with the conductor subsequently, the passenger was requested to write to the management direct, to which he replied, "No, it will be easier to avoid your road in the future."

John Bunyan, upon seeing a murderer being led to his execution, is said to have remarked, "But for the Grace of God, there goes John Bunyan."

Many others are credited with having expressed similar sentiments. So it is in this case. As stated above, this happened on another road, but a door may go out of adjustment at any time, or any of a number of things may happen to make passengers uncomfortable.

Comfort of body and mind is one of the first considerations of the traveler. No one wants to feel that the Delaware and Hudson is "easier to avoid."

Just an old thought for the New Year for every member of the Delaware and Hudson family.

Voice Control

ALL quarreling starts and is maintained by raised voices. The customer who comes to you for a fight, shouts. If there's no shouting comeback, there can be no fight. If you control your voice, you control the situation. In fact, a controlled voice puts you in command under all conditions. Don't shout, and learn to speak commandingly without appearing to command.—*Rays of Sunshine.*

Bulletin Index

AN index of the articles appearing in the issues of *The Bulletin* during the year 1932 has been prepared and copies will be sent to readers on request. To secure a copy, address Supervisor of Publications, Room 905, Delaware and Hudson Building, Albany, N. Y.

Dean of Enginemen

(*Continued from page 3*)

Gravity Road, until his retirement on February 1, 1932, MR. COPELAND'S life has been replete with thrills similar to the incident described above but, fortunately, he has come through it all without a mark on either himself or his record.

After carrying water to sectionmen, young ROBERT became a sort of handyman on the Gravity, acting as headman, footman, brakeman, and even as rodman for Sheldon Norton, the chief surveyor.

In 1878 MR. COPELAND left the Gravity for the "Steam Road", his first assignment being as brakeman on *Major Sykes*, Locomotive No. 1 at Carbondale. Illustrative of railroad development in the past 50 years, he remarks that the "Major" could haul only 18 of the 5-ton Gravity cars at a time, whereas one of the 1600-class Mallets would have been able to walk away with the entire rolling stock of about 4,800 cars, owned by the Gravity—if they had held together!

After flagging coal cars for "Hanky" Johnson, MR. COPELAND returned to yard service until, on August 5, 1881, he commenced firing a locomotive.

As he views his half-century in the cab, MR. COPELAND believes present day working conditions infinitely superior to those of the 80's. His first engine had half a dozen wide brass bands holding the jacket in place, four brass flagstaffs on the pilot beam, brass trimming on running boards, steam chests and elsewhere. Although his reporting time was officially 8 A. M. he started shining brass at 6 A. M. so that things would be spic and span before leaving time—and the pay was $1.75 a day.

Half a dozen years later he advanced to the right side of the cab and for a dozen years thereafter he pulled freight trains and the never-to-be-forgotten excursions to Lake Ladore. Then followed 27 years in regular passenger service; fast night runs on the winding tracks of the Pennsylvania Division.

For some time he kept a record of the cows killed by his engine as they stood placidly on the main line in the shade of box cars standing on one of the many curves. As this became a regular occurence he soon tired of recording the individual happenings.

MR. COPELAND recalls whimsically how, when electric headlights became standard equipment, his engine, although on a night run, was one of the last to be thus equipped, as this work was only done during general repairs.

His 45 years and one month at the throttle entitled him to the distinction of dean of Delaware and Hudson enginemen at the time of his retirement. MR. COPELAND recalls having worked under 16 different Master Mechanics. He has been an Odd Fellow for 53 years.

MR. COPELAND who, with Mrs. Copeland, resides at 79 Belmont St., Carbondale, Pa., has one son, J. Rexford, who is associated with R. J. Dun in Newark, N. J., and, he adds with great pride, "a grandson and granddaughter."

Why They Did It

MODERN science," says Dr. Logan Clendenning, "spends a great deal of its time finding out that things everybody has always known are true."

Farmers' wives, for example, scalded their milk pails to keep the milk from souring long before Pasteur discovered that germs sour milk and that scalding kills germs. The women also put the pails in the cellar if a thunder-storm threatened. Pasteur later pointed out that the spell of heat that precedes a summer storm made it easy for germs to develop. The cellar, being cool, protected the milk.

Milkmaids were aware that anyone who caught a mild skin disease called cow-pox was proof against the terrible smallpox. Cow-pox was common among those who milked cows. Jenner experimented and found that the milkmaids were right and so he invented vaccination.

In Peru, long ago, the medicine men dosed patients with the bark of a certain tree. Science identified the fever as malaria and the bark as quinine, now the standard cure.

In the spring, mothers for generations gave their children a dose of sulphur and molasses, with the addition of cod-liver oil. Science didn't know why this was good medicine until the discovery was made in 1906 that the lack of vitamin D is the cause of rickets. Cod-liver oil is rich in vitamin D. In the months when sunshine is abundant, children don't need vitamin D, because the sun supplies something that is the equivalent of it.

The layman is often years ahead of the scientific explanation. Lemon juice has been a daily ration in the British navy since 1795, because it prevented scurvy. Nobody knew why for over a century. Then came the discovery that lemon juice contains an essential vitamin.

The moral is this: Don't scoff too soon at homely advice, homemade medicines, and the ways of your fathers. And don't quit eating gravy on your potatoes just because some doctor tells you that the combination is indigestible.—*Through the Meshes.*

Turning Poison Gas Into Hair Tonic

THE ideal, if not the practice, of beating swords into plow shares is a common one. The metaphor, nevertheless, is an anachronism and on the basis of recent news it might be modernized by changing it to "turning poison gas into hair tonic." Such a change is highly to be desired, not only in the interest of rhetoric, but for the sake of those whose pates are bare, or in loftier language, in just recognition of what war, peace, and science are doing to curb parietal depilation.

The simple truth is that "mustard gas" or dichlorethylsulphide, as it is more felicitously termed, may be an efficient promoter of hair growth. The Journal of the American Medical Association reports that "dichlorethylsulphide in high dilution was the most efficient hair growth promoter of a considerable number of agents tried. Quantitative estimations of hair growth on shaved cats, treated locally with concentrations of 0.01% of the compound in 50% alcohol containing 2% of glycerin, showed a much greater production of hair than with tincture of cantharides, 1% mustard oil, and ointment containing 33% of cholesterol, a hydrolysate of hair, tincture of cinchona, and certain proprietaries containing the so-called hair ferment and other constituents. The hair grew not only more abundantly but also longer than in the untreated control areas. Impure yellow petrolatum, but not the pure white product, was next in efficiency to dichlorethylsulphide, this being attributed to impurities acting as irritants."

The Journal, however, points out that the results of hair tonics on cats should not arouse premature hopes in bald humans, since all shaved and bald skins do not respond equally well.—*The Technology Review.*

Highway Transport and The Railroad Grievance

(*Continued from page 5*)

modities have increased to 2,352,046. The fact that over 30% of these cars, in good repair and immediately available for service, have recently been standing idle is a striking comment on the present state of business. Management has become more efficient, employes are more efficient, operation has become safer and although the rail transportation machine has become, it would seem, as nearly perfect as it is possible to make it, improvements continue nevertheless.

There has been progress all along the line. Installations of automatic signals have been extended until important main tracks are completely equipped. By order of the Interstate Commerce Commission, and at great expense, automatic train control devices have been applied to tracks and to locomotives. Centralized train control, one of the most useful and economical devices yet produced has been perfected and adopted in areas of heavy traffic density. In these respects operations has been expedited and made safer in a marked degree.

In the year 1929 the Railway Express Agency, Inc., came into being and the plant and facilities of the American Railway Express Company came under the control of the railroads of this country. Thus the express transportation business became subsidiary to the railroads and continues so to function. The Railway Express agency is engaged in highway, as well as rail transport. That is, its facilities include some 10,000 trucks for the carriage of express packages between the shipper's store or warehouses and the express depots and vice versa. Furthermore, express is, or can be, carried by truck between stations independent entirely of rail movement.

Thus many railroad managements have or should have available under their own control highway transport facilities suitable for the expeditious movement of less than carload shipments by motor vehicles.

Highway transport for freight received considerable impetus during the world war; railroad facilities, complete as they had become, were not equal to such an unprecedented emergency. Motor trucks, of which there were 326,000 registered in this country in 1917, proved a useful adjunct to railroad transport. Their use was urged and encouraged but it was not until the year 1923 that the truck became a formidable competitor, bidding for a share of the tonnage for hauling between communities as distinguished from the more or less restricted urban field primarily occupied.

(To be continued)

Unfair!

Indignant Father—"Do you think it is fair, Bobby, after I told you there wasn't any Santa Claus, to go and tell the neighbors I laid your your Easter Eggs, too?"

The Pessimist's Soliloquy

WHAT'S the use of sunshine? Only blinds your eyes. What's the use of learning? Only makes you wise. What's the use of smiling? Wrinkles up your face. What's the use of flowers? Clutter up the place.

What's the use of eating? Nothing, only taste. What's the use of hustling? Haste is only waste. What's the use of music? Just a lot of noise. What's the use of loving? Only for the joys.

What's the use of singing? Only makes you glad. What's the use of goodness when the whole world's bad? What's the use of doctoring? Might as well be sick. What's the use of doing anything but kick?—*Anonymous.*

Travel DeLuxe

IN discussing road travel, William Hickey gives an account of a journey made by him in 1781 in which he travelled in a post chaise with four excellent post horses and two grooms, one a man of about thirty, the other a lad of sixteen, and made a distance of 140 miles in nineteen hours.

Mr. Hickey gives the following description of an unusual vehicle of that day:

> "Lord Peterborough had a travelling coach built about as large as the carriage of the Lord Mayor of London. It accommodated three persons on each side with superabundant room. In the center there drew up from the bottom, by springs, a table, sufficiently large to dine six persons comfortably. Under the floor were all the requisite apparatus of sauce pans, gridiron, etc. for cooking, likewise knives, forks, plates, dishes and other articles of a sideboard. Beneath the seats complete bedding for four persons was stowed, which, when wanted for use, were taken out and placed upon a frame, crossways, four Capital beds being made ready in five minutes. In a projection from the back of the body of the carriage and the same forward was ample stowage for wines, and all sorts of liquors, handsome cut glass bottles of various sizes being secured in fixed frames, so that no motion, short of an actual upset, could injure or damage them. In short, this stupendous vehicle was moving house, having in and about it every convenience appertaining to a mansion. It was finished in point of workmanship and decorations in the highest manner, the Peterborough Arms and heraldic ornaments being painted in a style of taste and with a delicacy that did the artist infinite credit.
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> "The young Earl's object in building so uncommon a vehicle was to ensure for himself every common comfort when travelling on the Continent, especially through Italy, where he knew by woeful experience the inns were execrable, abounding in dirt and filth, the beds swarming with bugs, fleas, and vermin of every description. But its weight proved an insuperable impediment to its ever being of any real use."

Back to School

(*Continued from page 7*)

part of the course were given over to the setting up of the outfit, regulating the gas supply, bevel cutting scrap pipe preparatory to welding, and taking the outfit down. From this point on the instruction led up to pipe welding, making both "rolling "welds" and "position welds." By the "rolling weld" is meant that the pipe being welded can be rolled or rotated as the weld progresses and the "position weld" is one where the pipe is stationary and the welder must weld around it. Needless to say this is the most difficult weld to make.

The students were required to cut small sections from their welds from time to time for the purpose of testing them by bending them through 180 degrees in a vise. This method of testing readily reveals whether the welder is getting proper penetration in his welds and is a simple test that can be made most anytime right on the job. The course also included fabrication of various pipe fittings such as tees, ells, laterals, reducers, etc. Scrap pipe varying in size from 2″ to 6″ in diameter was used for practice in making the fittings which were laid out with the aid of pipe templets.

As stated before, the last six lessons were given over to instruction and practice in reforming battered rail ends and heat treating rail ends. Reforming of rail ends is accomplished by heating the battered portion and hammering it back into shape. After this is done, if the joint is still low, it is built up with weld.

Heat treating of rail ends applies mostly to new rail and consists of heating the ball of the rail to a certain temperature, then quenching it with water and again heating it, this time to a lower temperature than the first heating, and allowing it to cool of its own accord. This hardens the rail where the greatest wear comes and thus prolongs its life considerably. Both of these rail treatments are being extensively employed on several railroads and are fast being put into use on other roads. The class was also schooled in building up worn frog points and switch points by welding.

As a final test of welding each member of the class made a sample pipe weld and cut a "coupon" from it. These "coupons" were forwarded to the Air Reduction Sales Company for testing the tensile strength of the welds. This is done by fastening the "coupons" in the machine designed for the purpose and pulling them until they break. The number of pounds pull per square inch is computed from readings recorded by the machine.

Some of the "coupons" submitted broke in the weld and some broke outside the weld. A "coupon" breaking inside the weld does not necessarily mean that it is a poor weld as this was proven conclusively in the "coupons" tested. Some of those that broke in the weld withstood a greater pull per square inch than did some which broke outside of the weld. This is due to several causes, chief among which is the variation in the pipe itself. A report from the company accompanying the return of the "coupons" was very favorable and it was stated that all of the welds were better than the average usually encountered in the beginner's work.

A few of the benefits derived from the school are: the knowledge of how to properly handle the equipment safely, the economical use of the gases and other materials connected with the work, having a greater number of men capable of welding and fabricating pipe fittings, etc., having men trained for welding on the track and having supervisors available with the knowledge of the art.

In several instances there has been a considerable saving to the Company as a direct result of the foregoing instruction.

In making pipe coils for steam radiators before the school was started one and one-quarter inch pipe return bends were purchased at a cost of $1.67 each and welded to the pipe as part of the coil. From the knowledge gained during the course regarding pipe bending, these return bends are now being made at a cost of $.90 each; a saving of $.77 on each return bend or a total saving of $7.70 on the average coil as installed in the roundhouse.

A broken frame on a water pump in a roundhouse was welded and the equipment restored to service at a total cost of $145.00, whereas a new pump for the purpose would have cost $1,200.00. The welding, incidently, required lining up the parts of the pump to one-thousandth of an inch. Five months, subsequent successful operation has tested the accuracy and strength of the welding.

So Do You and I!

THERE was a boy named Grumble Tone, who ran away to sea. "I'm sick of things on land," he said, "as sick as I can be. A life upon the bounding wave is just the life for me!"

But the seething ocean billows failed to stimulate his mirth, for he did not like the vessel or the dizzy, rolling berth, and he thought the sea was almost as unpleasant as the earth.

He wandered into foreign lands, he saw each wondrous sight, but nothing that he saw or heard seemed just exactly right. And so he journeyed on and on, still seeking for delight.

He talked with kings and ladies grand; he dined in courts, they say; but always found the people dull, and longed to get away to search for the mysterious land where he would want to stay.

He wandered over all the world, his hair grew white as snow. He reached that final bourn at last, where all of us must go, but never found the land he sought. The reason, would you know?

The reason was that north or south, where'er his steps were bent, on land or sea, in court or hall, he found but discontent. For he took his disposition with him everywhere he went.—*Ella Wheeler Wilcox.*

This and That

The 25,000,000 candle-power light at the lighthouse in New York bay may be seen fifty miles.

From forty to fifty feet a day is rated as a fair distance in digging a tunnel through a mountain.

The force of waves breaking on a shore averages 17 tons to the square yard.

The major leagues in the United States spend approximately $160,00 for baseballs every season.

Milk contains an average of 87½ per cent water.

Storage eggs whitened by sand are used to cheat the public in some sections of the country.

The loss to the world each year by rusting is said to be more than $2,500,000,000.

An electric spark of 20,000 volts is one hundred times brighter than the sun, and fifty per cent hotter.

Static electricity, which can be generated in the human body, has been sufficient to start fires in the presence of alcohol or gasoline vapors.

Clicks from the Rails

Odd Rail Shipments

A complete two-story frame house and 20 cars of seed oysters recently moved from the Atlantic to the Pacific coast are among odd shipments handled by rail. Another job that the trucks failed to bid for involved a load of 8 by 16 inch timbers each 100 feet long shipped from the Pacific coast to New York for marine construction. This load was carried on three flat cars, and because of its bulk and weight required three months for the trip. A steel tower 57½ feet long and weighing 322,000 pounds is the heaviest load of the sort on record as having traveled by rail, although similar structures 75 feet long have been carried on other occasions.

✣

Record Passenger Train

"Frisco" locomotive No. 1065 hauling 54 loaded passenger cars, carrying 3,275 people for 22 miles seems to have broken all records of this sort. Starting out with a modest little string of 20 cars No. 1065 caught up with No. 1067, crippled in a collision with an automobile at a grade crossing, and with only 34 carloads of excursionists tied up behind it. Adding the cripple's burden to its own No. 1065 moved the train, three-quarters of a mile in length, to a point where another engine was available.

✣

Soviet Secret

The delays to Russian railroad trains and the frequent wrecks and collisions have at last been accounted for according to *Railway Age*. It seems that very few train and engine crews, not to mention station employees, are equipped with watches, trains being run "by guess and by golly." It has been suggested that sun-dials be installed for use on pleasant days until such time as a better method is obtained for marking the flight of time.

Doughboy's Pets

Pullman Conductor J. W. Kliene never tires of telling the story of the time when he convoyed 618 doughboys from Battle Creek, Mich., to Camp McArthur, Texas, back in 1917. To his amazement he discovered that apparently every one of the soldiers had a pet of some sort and those who hadn't were making a determined attempt to secure one; everything from an owl to donkeys were aboard, and one lad was heartbroken because he couldn't get his cow through the door! When Conductor Kliene found that he could not clear the train of the animals which made it look more like an ark, he wired ahead to the military authorities, who "de-petted" the train. Their collection included: 2 donkeys, 15 dogs, 12 cats, 23 chickens, 1 owl, and a number of snakes.

✣

Inset Tickets

"Please look inside your new ticket" read signs throughout New Zealand's railway stations. Printed by a specially devised machine the new tickets contain advertisements of various products, inserted in the interior of the ticket proper, a tab bearing the word "Pull" protruding from the top. Similar tickets are in use on the London, Midland and Scottish Railways of England. The advertising value of these insets is said to be as great as a front page in a newspaper, due to the conditions under which it is read, although the inset contains a maximum of 32 words on one side.

✣

What a Man!

Guy Chivens, who handles the express business at the Illinois Central's Waterloo, Iowa, station, is nobody to "pick on." He is 6 feet 4½ inches tall, weighs 373 pounds and smokes a cigar eleven and a half inches long and three inches around, that burns from eight to ten hours.

"League of Nations" Troop

Boy Scout Troop No. 65, at Denver, sponsored by the Union Pacific railroad, has headquarters at the 24th Street schoolhouse. This troop is frequently referred to as the "League of Nations" troop for the reason that, in a membership of 22 boys, there are represented the following 12 nationalities: Chinese, Japanese, Spanish, German, Bohemian, Polish, Negro, English, French, Mexican, Russian, Jewish.

✣

Locomotive Photograph Collectors

Gathering locomotive photographs has become as much of a hobby as stamp collecting among an organized group of some 50 or more persons in the United States. Among them is the Rev. James H. Dean of Cleveland, his collection numbering 12,000 pictures obtained by purchase and exchange much the same as stamp collections are accumulated.

✣

Solve Travel Problem

The easiest way to prepare to retire in a sleeper was demonstrated by two middle-aged Englishmen who recently arrived at the station attired in their pajamas and bedroom slippers. Top-coats, hats and canes, not usually considered as sleeping attire, completed the costumes, the wearers sauntering nonchalantly to their train despite the staring crowd.

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Italy's Railroads Electrify

The government of Italy has decided to electrify about 3,000 miles more of the Italian State Railway system during the next four years. Main lines between Florence and Rome, Rome and Naples, and Naples and Salerno, secondary mains in the Venetian Provinces and Piedmontese lines not already equipped for electrical operation are included in the project.

Begin Anew

THERE is a very beautiful custom in Germany which it would be well to imitate everywhere. On the first day of the New Year, whatever may have been the quarrels or estrangements between friends and relatives, mutual visits are interchanged, kindly greetings given and received, all is forgotten and forgiven. Let this custom begin, then friendship and fellowship may be found that shall be blessed and lasting.

—FOSTER.